

REMARKS

Although the claims are not being currently amended, the Applicants have included a listing of the pending claims for the Examiner's convenience.

1. Claim Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 1 and 3 under 35 U.S.C. § 103(a) as being unpatentable over International Publication Number WO 99/21845 ("Chong"). According to the Examiner, Chong discloses several homologs of several compounds recited in claim 3. Specifically the Examiner cites: (1) Chong's 1-methyl-4-nitrophenyl)-piperazine as a homolog of 1-(1-methylethyl)-4-(4-nitrophenyl)piperazine which is recited in claim 3; (2) Chong's 4-(4-methyl-piperazin-1-yl)-aniline as a homolog of 4-[4-(1-methylethyl)-1-piperazinyl]benzenamine which is also recited in claim 3; and (3) Chong's 1-(4-isothiocyanato-phenyl)-4-methyl-piperazine as a homolog of 4-(2-hydroxyethyl)-1-(4-isothiocyanatophenyl) piperazine which is additionally recited in claim 3. The Examiner further objects to claim 2 as being dependent upon a rejected base claim.

In response, the Applicants first note that claim 2 is independent (and not dependent on any rejected base claim as noted by the Examiner). Second, the Examiner has not cited any homologs that correspond to the compound of claim 1. Accordingly, the Applicants believe that the Examiner intended to limit his rejection to the three compounds discussed in the Office Action which are recited in claim 3. Thus, the Applicants' response is directed to the same below.

A. No Prima Facie Case of Obviousness Has Been Established

The Applicants respectfully submit that a prima facie case of obviousness has not been established because there is absolutely no motivation to modify Chong to

obtain the compounds of the present invention; and in particular to obtain the three compounds recited in claim 3 as discussed by the Examiner. "To establish a prima facie case of obviousness . . . there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference." See MPEP § 2143.01, entitled "Basic Requirements of a Prima Facie Case of Obviousness."

According to the Examiner, one would have been motivated to make the compounds claimed "since homologs are structurally similar to the prior art compounds in terms of size, polarity, and electronegativity" and "which would result in both the prior art and instant invention compounds having similar physical and chemical properties, which in turn would render both groups of compounds having similar activity." *Office Action* at p. 2.

However, according to MPEP §2143.01, "[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." See MPEP §2143.01 under the subheading "The Proposed Modification Cannot Render The Prior Art Unsatisfactory For Its Intended Purpose."

Here, the proposed modification of Chong to obtain the compounds of the present invention would render the compounds of Chong unsatisfactory for their intended purpose.

Chong teaches that the purpose of 1-methyl-4-nitrophenyl)-piperazine; 4-(4-methyl-piperazin-1-yl)-aniline; and 1-(4-isothiocyanato-phenyl)-4-methyl-piperazine are to act as intermediates or as compounds for use in the synthesis of {4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3,5-dichloro-pyridin-4-yl)-methanone. See pages 58-59 of Chong, Example C70. In contrast, the compounds claimed in the present invention (asserted as homologs by the Examiner) have a different purpose and

contain either a methylethyl or hydroxyethyl group which is not present in the corresponding compound disclosed by Chong. Specifically, the compounds of the present invention at issue are 1-(1-methylethyl)-4-(4-nitrophenylpiperazine); 4-[4-(1-methylethyl)-1-piperazinyl]benzenamine; and 4-(2-hydroxyethyl)-1-(4-isothiocyantophenyl) piperazine.

By replacing Chong's intermediates with the above claimed compounds of the present invention, the {4-Amino-2-[4-(4-methyl-piperazin-1yl)-phenylamino]-thiazol-5-yl}-(3,5-dichloro-pyridin-4-yl)-methanone of Chong could not be synthesized. Accordingly, the compounds of the present invention render Chong unsatisfactory for its intended purpose (in synthesizing the title compound of Example C70 in Chong). Therefore, pursuant to MPEP §2143.01, this rejection should be withdrawn.

In addition, under MPEP §2144.09, "[i]f the prior art does not teach any specific or significant utility for the disclosed compounds, then the prior art is not sufficient to render structurally similar claims *prima facie* obvious because there is no motivation for one of ordinary skill in the art to make the reference compounds, much less any structurally related compounds Similarly, if the prior art merely discloses compounds as intermediates in the production of a final product, one of ordinary skill in the art would not have been motivated to stop the reference synthesis and investigate the intermediate compounds which have different uses." See MPEP §2144.09 under the subheading, "If Prior Art Compounds Have No Utility, Or Utility Only As Intermediates, Claimed Structurally Similar Compounds May Not Be Prima Facie Obvious Over The Prior Art."

Here, since Chong teaches that that the compounds in Example C70 are only useful as intermediates or starting materials in the synthesis of Chong's {4-Amino-2-[4-(4-methyl-piperazin-1yl)-phenylamino]-thiazol-5-yl}-(3,5-dichloro-pyridin-4-yl)-methanone (Chong, at pp. 57-58), there can be no motivation (under the law and under MPEP §2144.09) for one of ordinary skill in the art to make or contemplate the

compounds of the presently claimed invention. Accordingly, a *prima facie* case of obviousness has not been established. See MPEP § 2143.01, ("To establish a *prima facie* case of obviousness . . . there must be some suggestion or motivation . . . to modify the reference").¹

Thus, for all of the above reasons, the Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

2. Claim Objection

The Examiner has objected to claim 2 as being dependent on a rejected base claim, but has otherwise indicated that it would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, as stated above, the Applicants respectfully note that claim 2 is independent (it has never been a dependent claim). Accordingly, the Applicants respectfully request that this objection be withdrawn.

¹ In addition, according to MPEP §2143.01, the "mere fact that references can be combined or modified does not render the resultant combination [or modification] obvious" and the "fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness The level of skill in the art cannot be relied upon to provide the suggestion to combine [or modify] references." Here, the fact that the compounds in Chong can be modified to obtain the compounds claimed in the present invention is clearly insufficient under the law and MPEP to establish a *prima facie* case of obviousness.

CONCLUSION

No fee is believed to be required in connection with the filing of this Reply, other than the fee for the Petition For Extension of Time. If any additional fees are deemed necessary, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 08-2525.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian Remy", is written over a horizontal line.

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